

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-048664

(43)Date of publication of application : 18.02.1992

(51)Int.CI.

H01S 3/094

(21)Application number : 02-154025

(71)Applicant : NIPPON STEEL CORP

(22)Date of filing : 14.06.1990

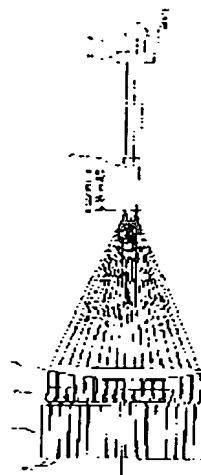
(72)Inventor : YAMAGUCHI SATORU
IMAI HIROFUMI

(54) ARRAY SEMICONDUCTOR LASER EDGE EXCITATION SOLID STATE LASER

(57)Abstract:

PURPOSE: To acquire a semiconductor laser excitation solid state laser which produces solid state laser output light effectively by providing an optical coupler which consists of a lens array and a second lens used as a focusing lens.

CONSTITUTION: An Nd:YAG laser is used as a solid state laser element 4. Diachronic coating is performed for one edge face and a resonator is formed of the face as an excitation surface and of an output mirror 5. The used array semiconductor laser 1 is composed of an array which is formed by wiring 20 active layer stripes 7 of 100 μ m width at 500 μ m interval. A condenser lens array 2 is composed of 20 distribution factor lenses of 500 μ m width and condenses and collimates each projection light from 20 stripes. Then, 20 laser beams are focused by a second lens 3 and superposed at one place for end excitation of a solid state laser element 4 which consists of Nd:YAG rod. A highly efficient solid state laser of good beam quality and high output can be realized in this way.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]